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Assessing Economic Impacts of Urban Recreation Development: Lowell National Historical Park

Lowell Historic Preservation Commission
U.S. Department of the Interior



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This article describes a pragmatic approach to assessing the economic impact of major urban recreation development. It is based on an assessment of the impact of the Lowell National Historical Park (LNHP) on the metropolitan area of Lowell, Massachusetts. This study was conducted by the authors in response to the National Park Services' (NPS) need to anticipate impacts resulting from the creation of a new National Park in Lowell. More specifically, the NPS requested an analysis of the likely impact that the LNHP would have on economic development, employment, land use patterns, and local

citizens. The assessment was prepared under two constraints: (1) no primary data was available relating specifically to the LNHP, and (2) the study duration was six weeks. The following summarizes the process used to develop the study and the important findings.

The process is significant to planners and analysts because it uses surrogate indicators as a means of determining probable impact. It is proposed that this approach can be appropriately used when the need arises to make an assessment in a short time with limited data resources. The specific findings may be of interest to planners who are attempting to catalyze local downtown development. While every city cannot be the recipient of a National Historical Park, the potential for using a city's historic and cultural resources to stimulate development is very substantial. For example, Lowell's image was that of a tired, decaying, industrial city when it began to stimulate an economic revival by capitalizing on its assets which included:

- a work force that was highly skilled, underpaid, and underused
- an availability of inexpensive commercial and industrial space
- the support of the city administration in attracting new industry
- a strong sense of history, community identity, and pride.

These assets are at least partially found in most cities of the North and East.

HISTORICAL OVERVIEW

Lowell was founded in 1822 by a group of Boston merchants and financiers. Located on a bend in the Merrimack River, 30 miles northwest of Boston, the site offered exceptional potential for developing water power using a system of canals. In addition, it was a nexus of transportation and had substantial open space to accommodate large industrial structures. The city founders took advantage of these factors and built what became a model 19th century industrial community, utilizing the most advanced ideas of the period concerning industrial technology, scientific research and capital formation.

The city was successful from the beginning. After 14 years of development, it had one of the most advanced canal systems in the nation and its industry employed more than 7,500 workers. By 1850, the city had become the second largest in the Commonwealth and was considered the textile center of the nation. Between 1850 and 1920, it became a focus of changing social conditions. Nowhere was the "flight from the farm" more apparent than in Lowell. Young Yankee women were fleeing a stagnant future in New England's rural areas to take advantage of a new future offered by employment in a planned mill community. Shortly thereafter, waves of Irish, German, Italian, and Polish immigrants came to Lowell seeking employment. This led to a period of social strife. Initial conflicts were between Yankee and immigrant employees. Willing to work at cheaper rates, immigrants began to replace the "Mill Girls," who then became unemployed. This

conflict was soon translated into a labor-management issue. All pretenses of the utopian community fostered by Lowell's founders were abandoned as the city thrived on child labor, the 14-hour day, and neglected tenements. National labor reforms mitigated the severity of these conditions as World War I approached. However, with the end of the war, Lowell's equipment, buildings, operating procedures, and management practices became rapidly outmoded, marking the end of Lowell as a vibrant mill town. Beginning with the 1920s, the city began a steady economic decline interrupted only briefly by several short-term "booms" that did not bottom-out until the late 1960s.

REBIRTH

By 1968, the city was faced with high unemployment; an aged, though highly skilled work force; a dwindling tax base; excess plant capacity; and a largely vacant central business district. There was little left to attract either new investments or new residents. Realizing this, the city administration began to take stock of its assets in an effort to formulate a strategy for improving the economic and social well being of its citizens. Many of these ideas were synthesized in a Model Cities proposal calling for: (1) the use of the city as a learning laboratory for interpreting the Industrial Revolution; (2) the improvement of the urban streets and to reinforce the city's historical and cultural assets; and (3) the preservation and enhancement of historical resources as a strategy for economic revitalization.

This plan formed the key ideas that grew into a 1972 city policy advocating the creation of a historic and cultural park as the focus of the city's revitalization effort. A lobbying effort by private businesses and community groups led to the state government committing \$9.1 million dollars for the creation of The Lowell Heritage State Park and another \$10 million for transportation improvements. By the end of 1976, total committed funds for the proposed park system reached \$26.4 million from local, state, and federal sources. Partially in response to this momentum, the United States Congress passed a 1978 act that created the Lowell National Historical Park (LNHP) and committed \$40 million over a 10-year period to its development.¹ It is now projected that approximately \$320 million will be spent by the public and private sectors in Lowell for park development; central business district revitalization; transportation improvements; public facilities; housing, and industrial development.² A large proportion is allowed for preservation and restoration purposes.

THE NATIONAL PARK SERVICE AND THE NEED FOR AN ECONOMIC IMPACT ASSESSMENT

There are many public agencies involved in the general rebirth of Lowell's National Historic Park. Among them are at least four agencies of the Commonwealth of Massachusetts, the Northern Middlesex

Area Commission, the Lowell City Planning Agency, the Lowell Historic Preservation Commission, and the National Park Service. Included in the overall plan are projects on transportation to improve the accessibility to the park area, street improvements, education, park management, and the rehabilitation of buildings for office and commercial uses, and as elderly housing. This article specifically analyzes the involvement of the National Park Service in these planning efforts.

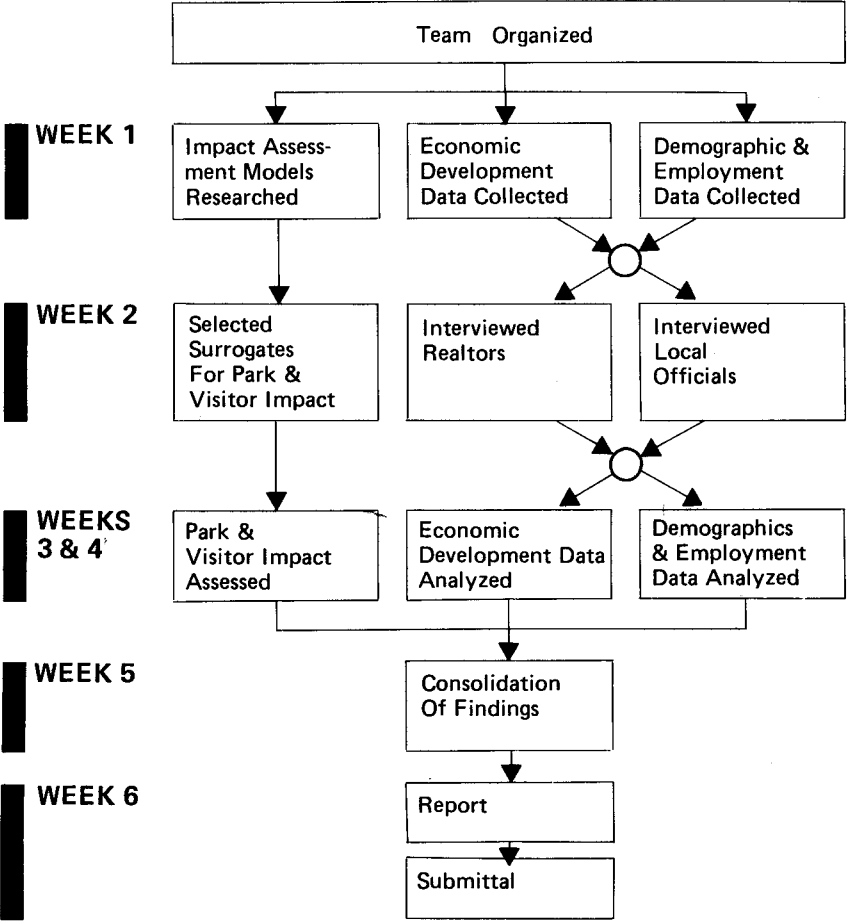
The National Park Service is responsible for planning and operating the LNHP. A planning team was located in Lowell during 1979 to develop a management plan and project the environmental impacts associated with its fulfillment. In late 1979, shortly before the management plan was to be submitted, the park service planning team received a request from its Washington office to expand its planning efforts to include an assessment of the economic impacts that would occur as a result of the development of the park. This assignment was given six weeks before the total planning package was to be reviewed by Congress. The team, realizing that it required outside assistance, then hired a study team headed by the authors to accomplish the new assignment. In particular, the study team was assigned the responsibility of undertaking a demographic and employment analysis; assessing the impact of the park on revitalization of Lowell's downtown; determining the LNHP worker staff's impact upon the city; and assessing the impact of visitor expenditures on the area's economy. How these assignments were carried out is outlined in Figure 1 and described below.

Two key problems surfaced from the very beginning. First, given the short time period, there was the need to obtain basic demographic and economic base information concerning the city of Lowell. This material was found in both rough and polished form in reports and unpublished data of the Lowell City Planning Office, the Northern Middlesex Area Commission, the Commonwealth of Massachusetts Department of Employment Security, and the Lowell Historic Preservation Commission. This information became the basis for data extrapolation relevant to the economic health of Lowell.

The second key problem was to find surrogate indicators or sources that could be used to approximate the impact of LNHP employment and visitor expenditures on Lowell. After careful analysis, two surrogates that had much in common with the LNHP development were found. The first surrogate was an impact assessment of employment by the University of Lowell, which analyzed an employee pool that was remarkably similar to the staff that would be working at the LNHP (Dery, Downey, and McDonough 1979). More specifically, the quality of life expectations, spending patterns, residency location decisions, and income levels of the faculty and staff at the University of Lowell and the NPS staff had strong commonalities.

The second surrogate, which focused upon visitor patterns, was synthesized from studies prepared for 12 National Park visitor centers and, a study of Old Sturbridge Village (OSV) Sturbridge,

Figure 1. Key Tasks Flow Chart



Massachusetts (Zube, Crystal, Palmer 1976; Parker et al. 1978; Gilmar-tin 1977). OSV is a nationally-recognized and respected outdoor his-torical museum that emphasizes a working environment. Its visitors are highly educated, financially well off, day trippers. This profile coincides with the expected clientele of the LNHP.

Demographic and Employment Analysis

The population profile for Lowell is typical of a metropolitan core city in New England. Its people are more apt to be poor, old, non-Caucasian, foreign-born, and live in a female-headed household than the surrounding towns that constitute the Lowell metropolitan area. Its projected population growth rate over the next decade ranges from an increase of 1 percent to a net loss of 4 percent. Over 40 percent of the city's residents have a native tongue other than English (primarily French, Greek, and Polish).

Since 1920, the area has suffered a recurring "boom and bust" cycle affecting the traditional industries of textile manufacturing and leather goods. It was noted that within the past decade, this cyclical behavior has become somewhat less pronounced with the establishment of new industrial bases in the fields of nonelectrical machinery and electronic computing equipment. These firms, as witnessed by the current recession, appear to have a stronger resiliency to economic downturns than the textile and leather factories.

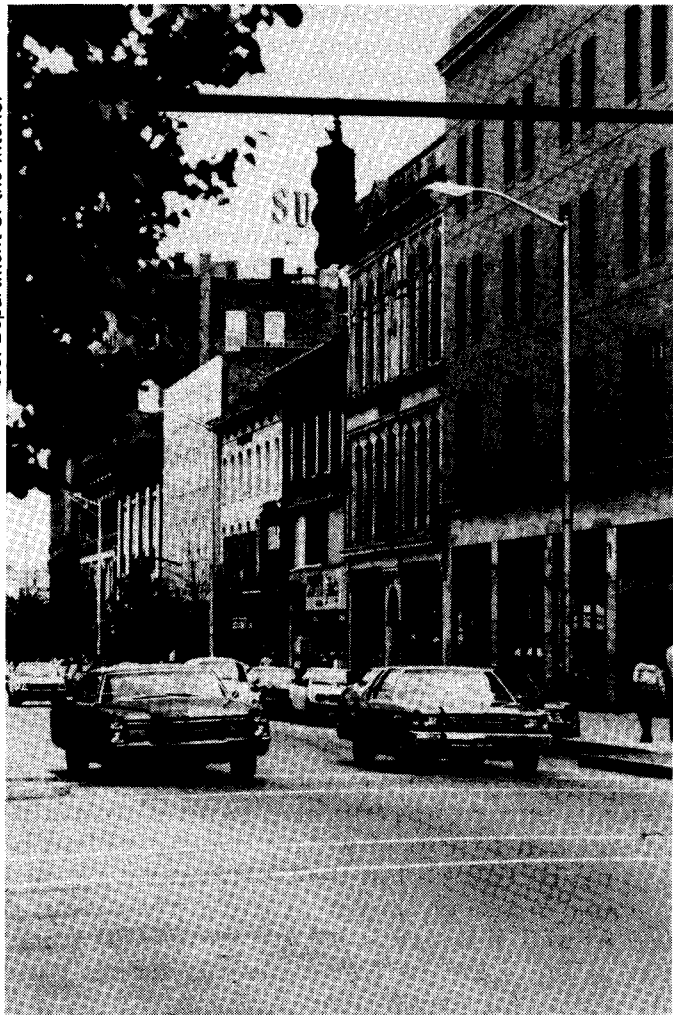
Like most Northern and Eastern cities, Lowell was hard hit by the recession of 1975. However, its steady recovery indicates that a more stable economic environment is evolving, led by the newer growth industries. At the peak of the recession, unemployment reached 13.3 percent, but declined by approximately 2 percent each year thereafter. By 1979, unemployment was reduced to 6.6 percent of the workforce with 69,700 employed. Further, many of the more recently arrived industries are expanding. For example, Wang Laboratories, one of the world's largest computer makers and the city's leading employer, is currently enlarging facilities and hiring additional personnel. Few of Lowell's major businesses are now active in the heavy manufacturing, construction, and metal fabrication trades. This is a significant and positive factor since these industries are highly sensitive to fluctuations in the national economy.

Investigation revealed that the LNHP is placed in an area where the residential and commercial population is likely to be unable to respond to increases in property values. If the park continues to be developed as expected, there will be a high likelihood that property values will rise and that displacement will occur. In terms of employment, the data showed that there is little in common between the Lowell labor force and the types of skills required to operate the park.

The Impact of the Park on Downtown

The LNHP is located near the city's older mill complexes and within the city's central business district (CBD). Both the mills and the CBD are no longer in decline. In fact, there are several incipient signs that revitalization is occurring. Currently there are approximately 1.5 million square feet of vacant industrial space near the downtown area. Much of this space is in older mill buildings, the preservation of which are of first concern to the park planners. However, there is considerable private and public interest in renting this space and it is expected to be largely occupied in the next few years. For instance, the Wang Laboratories Company has expressed particular interest in the adaptive reuse of mill space.

The downtown area, after years of decline in retail activity, is finally being stabilized. Several reasons can be offered for this result including an expansion in new businesses, civic improvements (parking, sidewalks, and facades), and the psychological uplift provided by the park. Nowhere can these improvements be better noted than in the



The historic commercial buildings on Merrimack Street—one of downtown Lowell's major shopping areas—are being rehabilitated for retail, restaurant, and entertainment uses at ground level.

facts that commercial rental rates are increasing dramatically and that Jordan Marsh, a firm that has been reluctant to commit to traditional downtowns, has signed a long-term lease to stay in the downtown area.

While the possibility of full use of the industrial space has to be viewed optimistically by NPS planners, the rising costs for commercial rental space is disconcerting. Based on findings from a telephone survey of leading realtors in Lowell, commercial space values have increased 50-100 percent in two years despite a municipal property tax

cut. One regularly hears talk among realtors of the potential for creating another Faneuil Hall, Ghiradelli Square, Harbor Place or Fulton Fish Market shopping area. While these unique places provide great pedestrian activity and considerable economic returns to investors, they are not designed to serve the local population. The park planners do not want to be viewed as "gentrifiers" and are very concerned about the park being a good neighbor. Yet it is a distinct possibility that the commercial areas nearest the park will become tourist oriented, and the residences converted into fashionable, high price units. As well, it is likely that some of the mill space, formerly used for industrial purposes will be converted into trendy, boutique-type businesses. If this occurs, there is concern about what will happen to the present residents and the shops that cater to them. The question is particularly significant since rental fees and real estate prices in the area are already increasing at a faster rate than the rest of the city. And, this phenomenon has occurred with most of the park-sponsored improvements still only in the planning stage.

THE IMPACT OF THE NPS ON THE CITY OF LOWELL

For the last several years the NPS has been gravely concerned about its ability to meet a rapidly expanding national responsibility for operating, maintaining, and developing areas under its domain. In fact, its budget has not kept pace with its new responsibilities. The local NPS planning team was concerned that it not promise Lowell more than it could deliver. For this reason, the NPS felt that an assessment of economic impacts was critical to its decision making. In essence, the findings were to help answer the question of how much NPS investment was necessary before the LNHP might go from having a positive economic impact on the city to actually becoming a disruptive influence. As well, it was expected that the answers to this question would serve as input for the NPS budgetary requests and as background information for congressional hearings.

The Washington office requested that two scenarios be created and analyzed. The first, a "minimum action" plan, projects maintaining existing staff and limiting federal investment to its present level. This minimum presence would be required by Congress's intent in establishing the LNHP. The second alternative, the enactment of the proposed LNHP Master Plan, projects a quadrupling of park personnel.

Impact of LNHP Staff and Operation

In either the Minimum Action or Full Action Plan scenarios, the impact of the LNHP staff is expected to be quite small within both the local and regional context. For example, the 150 paid positions in the proposed Full Action Plan would potentially increase the labor force in the city by only 0.5 percent and by only 0.2 percent in the region.

Of the \$2.5 million projected for the park's payroll under the Full Action Plan, about 33 percent or \$850,000 will be spent in Lowell and 52 percent or \$1.3 million will be spent in greater Lowell. The remaining \$1.2 million will be spent outside greater Lowell. Under the Minimum Action Plan, these expenditures would be reduced to \$170,000 or 24 percent in Lowell and \$310,000 or 44 percent in greater Lowell. It is anticipated that employees will choose residential areas similar to those used by residents of similar income levels. The difference in percent of expenditures for the two alternatives is due to the Minimum Action Plan's larger proportion of professional staff, who are expected to live outside the city center.

Of equal impact to LNHP staff salaries are the projected LNHP operational costs. Under the Minimum Action Plan, \$506,000 of the \$754,000 budget will remain in Lowell, while \$1.7 million out of \$2.5 million will remain in the city under the Full Action Plan.

Because of the "multiplier effect," the payroll and operational expenses of the park will generate additional expenditures in the region. This is due to the fact that an extensive part of the park's payroll and operational expenses will circulate throughout the community in such a manner that additional income and employment will be generated well beyond the initial dollar volume. For example, the purchase of goods and services by the employees and their households will generate income to local merchants and service businesses. This additional income will create more employment, which in turn will create additional demand for goods and services, and so forth.

In selecting an appropriate multiplier, factors such as the regional economic structure and the type of facility proposed must be considered. For the LNHP staff and operational expenditures, the city's multiplier was assumed to be 0.75. For the greater Lowell area, the multiplier was set at 0.865. In effect, for every dollar spent by the LNHP staff, an additional \$0.75 of economic activity will be generated in Lowell and \$0.865 in greater Lowell. Table 1 summarizes the expected direct and indirect expenditure under both Minimum Action and Full Action scenarios. It should be noted that the \$4.4 million expenditure in Lowell under the Full Action Plan is a small fraction (0.5 percent) of the approximately \$1 billion currently expended on goods and services.

Visitor Impact

Another major economic impact concerns visitors to the park. Under the Full Action Plan, it is anticipated that by the year 1990 one million visitors will attend the park per annum. Under the Minimum Action, only a tenth, or about 100,000 visitors are expected to attend during that year. These figures were established by the NPS based on visitation patterns at other historical parks in New England.

The anticipated patterns of visitor behavior and choice of accommodations were estimated using studies of twelve National Park

Table 1 **Direct and Indirect LNHP Expenditures
In Lowell and Greater Lowell^a**

	Minimum Action Plan		Full Action Plan	
	Lowell	Greater Lowell	Lowell	Greater Lowell
Direct				
Staff	\$ 170,800	\$ 310,200	\$ 847,200	\$1,301,600
Operation	505,800	535,900	1,675,000	1,775,000
Total	676,600	846,100	2,522,200	3,076,600
Indirect (Multiplier Effect)^b				
LNHP Related				
Business	101,500	169,200	378,300	615,300
Non-Staff Related				
Business				
Expenditures	406,000	562,700	1,513,300	2,045,900
Total	507,500	731,900	1,891,600	2,661,200
Grand Total	1,184,100	1,578,800	4,413,800	5,737,800

a In 1978 dollars

b Multiplier adapted from G. C. Dery, G. J. Downey, and C. C. McDonough, University of Lowell Economic Impact Study, University of Lowell, Lowell, Massachusetts, 1979.

visitor centers, half of which interpret historical themes, (Zube, Crystal, and Palmer 1976) and Old Sturbridge Village (Parker et al. 1978; Gilmartin 1977). The economic impact of these visitor characteristics was calibrated using the results of an input-output model of tourism in Massachusetts (Cournoyer and Kindall 1978). The model was based on logs of expenditures kept by visitors; Massachusetts rooms and meal tax figures; employment and wages in selected industries; and lodging records from selected hotels, motels, and campgrounds.

Three alternative LNHP visitation patterns were investigated. If the park follows the pattern of previously-studied NPS historical areas, then 34.5 percent of the visitors will stay in hotels, 34.5 percent will stay in campgrounds, 15 percent will stay with friends or relatives, and 16 percent will be passing through or be on day trips. The second

Table 2 **Summary of Visitor Expenditures^{a,b}**

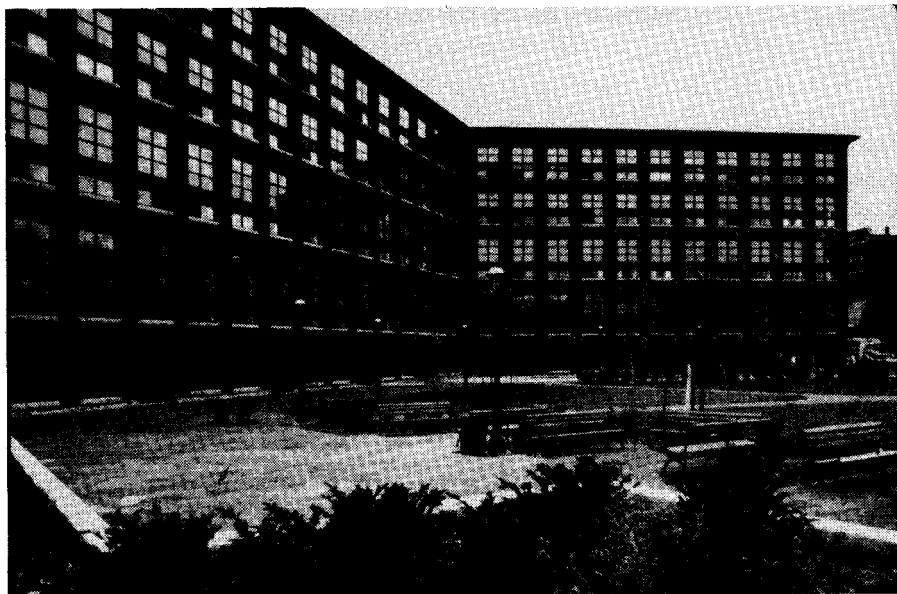
Expenditure	Full Action Plan	Adjusted Full Action Plan	Minimum Action Plan
Lodging	7,452	8,137	344
Eating & Drinking	8,061	9,090	630
Grocery	1,277	987	82
Liquor Stores	1,029	1,451	178
Gas Stations	2,704	2,687	214
Local Public Transit	1,267	1,606	146
Amusement	1,113	1,234	96
Miscellaneous	5,153	5,722	481
Total	28,156	30,914	2,171

a In 1978 dollars

b In 1000s of dollars

alternative adjusted these figures to reflect the type of pattern expected in an urban area. In this alternative 40 percent of the visitors are expected to stay in hotels, 10 percent in campgrounds, 15 percent with friends or relatives, and 35 percent on day trips. If the park does not implement its Master Plan, then these figures are expected to shift even more drastically to a pattern characterizing a regional park. In this situation, 16 percent of all visitors are expected to stay in hotels, 6 percent in campgrounds, 16 percent with friends or relatives, and 62 percent on day trips. Anticipated expenditures, in 1978 dollars, for these visitors were projected from average figures for Massachusetts, adjusted for use in Middlesex County.

The projections for eight types of visitor expenditures are summarized in Table 2. The Full Action Plan will produce an anticipated \$28 million in direct expenditures per year. This figure rises to \$31 million when the projections are adjusted for a more urban visitation pattern. Most of the dollar gains are in lodging, eating, drinking, and liquor store sectors. Under the Minimum Action Plan an estimated \$2 million will be spent by visitors.



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The Market Mills complex is a joint development project of the National Park Service, the Lowell Historic Preservation Commission, and Market Mills Associates. Made up of mills once used for wool processing and weaving, this complex will house the NPS visitor center, housing, fast food, retail stores, and work spaces for artists.

In general, it is difficult to derive estimates of economic multipliers for park and recreation facilities (see for example, Archer 1976; Canadian Outdoor Recreation Research 1975). A conservative multiplier of 0.3 for indirect and induced expenditures due to tourist-based income would suggest that in 1990 the total economic impact under the proposed adjusted Full Action Plan would be \$40 million. This impact is significant, representing approximately 4 percent of Lowell's present expenditures on goods and services. If no further action is taken toward developing LNHP, the visitor's total economic impact would be \$2.75 million. Thus, it is anticipated that tourism will be one of the more important sources of income for greater Lowell.

POSITIVE AND NEGATIVE IMPACTS

The most significant long-term positive economic impact from the park will probably be the additional jobs created by the influx of tourist dollars. Based on Cournoyer and Kindall data for 1978, the \$40 million attributable to visitor expenditures with the Full Action Plan will create the equivalent of approximately 1200 new (full-time equivalents) jobs. Only 90 new jobs would be generated by the \$2.75

millions of visitor expenditures under the Minimum Action Plan. It is clear that if the Full Action Plan is implemented the park will have a major positive impact upon the city's employment situation.

The park will not be without negative impacts. In a direct sense, these negative impacts will lead to crowded streets and the possible disruption of neighborhood cohesion. There is extensive potential for the destruction of neighborhood businesses resulting from rising real estate and rental costs. Also, the city as previously noted, has a largely elderly and low-income population whose welfare would be adversely affected by gentrification. As land values and building rental costs rise, and customer profiles change to reflect the more affluent tourist market, there is a high likelihood that residential and neighborhood commercial displacement will occur.

These factors are causing justifiable apprehension among many agencies in the city. Several methods intended to mitigate gentrification and neighborhood upheaval are under review, including rent subsidies, "percentage of profit" rental agreements, tax abatements, and resettlement assistance. The planning staffs of Lowell, LNHP, and the Historic Commission are currently monitoring this situation and have developed informal policies as a response to the problem. It is anticipated that using these methods in conjunction with an ongoing demographic analysis can help improve neighborhood stability. However, this task will take time, effort, and multijurisdictional coordination.

CONCLUSION

This case shows that an economic impact assessment can be undertaken in a short time relying primarily on existing data. While the accuracy of borrowed data is a concern, the fact that multiple data bases exist serves to mitigate the potential for error. In most Northern and Eastern cities, there are many population, employment, and development data bases from which to draw. In Massachusetts, state, regional, and city offices all collect data on population, employment, and development. By using these data resources and applying the approaches and assessment techniques used in this study, time and costs can be reduced without a significant distortion of the findings.

At the same time, however, while it is clear that "quick" assessment methods can be effective, it is also clear that great caution must be taken in using them. The use of data collected for other purposes, the selection of the surrogate indicators used for assessment, and judgments made must all be tempered. Further, it is critical that all assessment documents make it very clear that proxies were used.

It is clear that the direct economic impact of the LNHP will be significant. Employment will rise, shops will increase sales and, perhaps most significantly, it will reinforce the redevelopment climate of the city. Further, the city will regain a positive sense of its own history and culture and therefore have a stronger sense of community. However, simultaneously, the park will also encourage gentrification (not

regentrification—the gentry never lived in the impacted areas), stimulate instability in some neighborhoods, and lead to some increased economic hardship for the poor and elderly.

The historic park theme as an economic stimulus, whether of national, state, or local importance, can be at least partially replicated in other cities and towns that wish to capitalize on their own cultural attributes. In Massachusetts alone, a series of heritage park proposals have been created based in part on the Lowell experience. They all focus on the historical and cultural assets of tired, industrial cities. These cities include Lynn, Fall River, Gardner, Springfield, Holyoke, and North Adams. Also, on a national scale, the National Trust for Historic Preservation is now in the midst of developing a Main Street USA Program that will focus on techniques to enhance the historic and cultural assets of the centers of older communities across the nation.

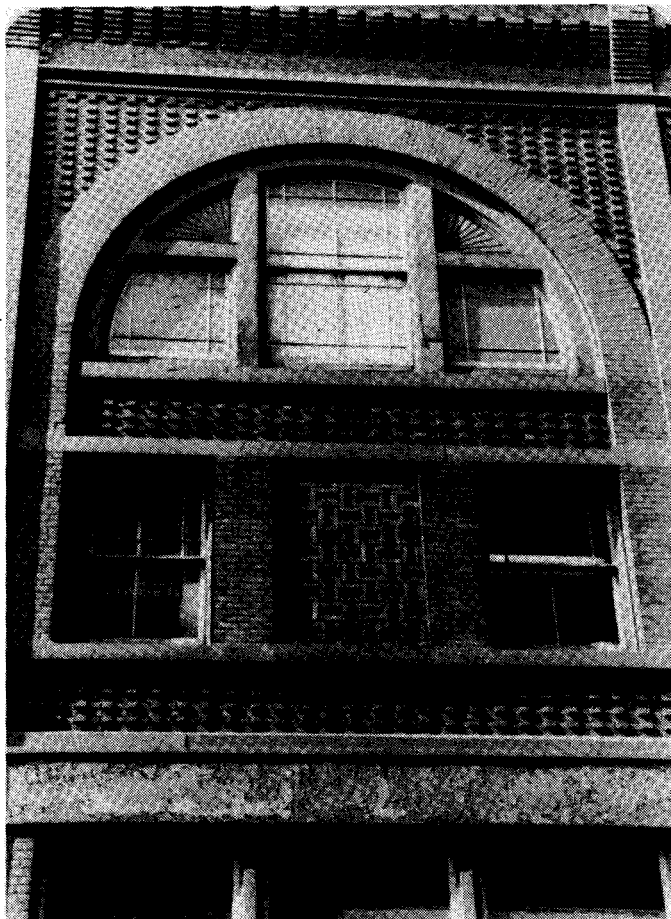
No two cities are alike and no two cities can develop approaches to capture their historical and cultural heritage in the same way. However, it is clear that focusing on a city's historical and cultural uniqueness as part of a revitalization effort can contribute to a positive sense of community and a higher quality of life. Indeed, it is possible, given increased costs for travel and new building, that history, culture, recreation, and economic viability will become the formula for the positive revitalization of many of our older urban areas.

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Notes

1. See Public Law 95-290, June 5, 1978, An act to provide for the establishment of the Lowell National Historic Park in the Commonwealth of Massachusetts, and for other purposes.
2. Through November, 1981, Lowell's improvements have not been adversely impacted by the budget cuts of the Reagan administration. However, there are many private sector projects "on hold" due to high interest rates.



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